

In the Claims

Please replace claim 9 with the following:

9. (Amended) A method for clearing slurry from a polishing pad in a CMP process, comprising:

placing a wafer substrate in contact with a polishing pad;

rotating said polishing pad at a first speed;

dispensing slurry onto said polishing pad while said pad is rotating with said wafer substrates in contact with said pad;

terminating slurry dispense; and

spraying a high pressure fluid around said wafer substrate to remove slurry from between said wafer substrate and said pad using high a pressure spray portion of a slurry dispense bar; and rotating said pad at a second speed during said spraying step.

In the Drawings

Please replace FIG. 2 with the attached. Legend -- Prior Art -- has been added per Examiner's observations.

Remarks

Applicants have made changes to the specification as indicated above to correct a number of typographical errors. Claims and drawings have been changed as indicated above.

Claims 9 – 12 and 20 stand rejected under 35 U.S.C. §112, second paragraph. Also, claims 1 – 20 stand rejected under 35 U.S.C. §103(a) as being unpatentable over *Osterheld et al* (U.S. Patent 6,319,098).

With respect to the §112 rejection, claim 9 has been amended to address Examiner's concerns. Since, claim 9 is now has proper antecedent basis, dependent claims 10 – 12 have also proper antecedent basis. Claim 20 had not been revised, Applicants respectfully note that "*said second wafer carrier*" has proper antecedent basis from line 1 of the claim, namely "...including a second wafer carrier. . ." Applicants believe that the §112 rejections have been addressed.

With respect to the §103 rejection, the Office Action does not establish a *prima facie* case of obviousness. *Osterheld et al* as the Office Action states does not disclose the steps of terminating the slurry dispense and rotating the pad a second speed during spraying. The claimed invention was developed through experimentation not taught by *Osterheld et al*. Refer to FIGS. 7 and 8. The claimed invention achieved a reduction of defect density of about 15.15% (from 0.25 defects/ μm^2 to about 0.21 defects/ μm^2) and a reduction in the standard deviation of the process from 8.2% to about 6.1%. The lower standard deviation indicates better repeatability of the process.

Osterheld et al. does not suggest or teach Applicants' claimed invention. Applicants' have addressed "a need for a method and/or apparatus which will quickly remove the slurry from the pad, thus more accurately controlling the removal rate of the substrate." (Paragraph 2, Page 3). *Osterheld et al.* has not suggested the solution to the aforementioned need. In that,

A patentable invention may lie in the discovery of the source of a problem even though the remedy may be obvious once the source of the problem is identified. This is part of the subject matter as a whole which should always be considered in determining the obviousness of an invention under 35 USC §103. (*In re Spinnable*, 405 F. 2d 578, 160 USPQ 237 (CCPA 1969))

Additionally, the Office Action's assertion that "*the steps of terminating the slurry dispense and rotating the pad at a second speed during spraying, would have been obvious. . .since a computer could be programmed to perform this [sic] steps on the basis of the user's preference as a matter of obvious design choice (Office Action Page 3, Paragraph 3)*" lacks support from the cited reference. Whether a computer could be programmed to perform steps in a process does not support the premise of a *prima facie* case of obviousness under §103.

There must be a basis in the art for combining or modifying references. Applicants' claimed invention with the steps of terminating the slurry dispense and rotating the pad a second speed during spraying is not suggested by *Osterheld et al*. MPEP §2143.01 provides: